

GP-301230

METHOD FOR ENGINE CONDITION CONTROL WITH
TURBOCOMPRESSOR CONTROLLABLE BYPASS

ABSTRACT OF THE DISCLOSURE

A system for a turbocharged internal combustion engine includes an engine having a charge inlet connected to the compressor outlet and an exhaust outlet connected to the turbine inlet for driving the turbocharger with
5 hot exhaust gas and supplying compressed air to the engine for combustion. A bypass duct connects the compressor outlet to the turbine inlet for diverting a portion of the compressed air around the engine to the turbine inlet or exhaust. A control device selectively controls the diversion of air. An operating method for the system involves controlling peak cylinder firing
10 pressure and/or maximum turbine inlet temperature, optionally with exhaust NO_x and smoke in order to limit these variables to acceptable limits with a minimum of operational limitations.